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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Shinji KIMURA et al.

Serial No.: 10/663,700

Filed: September 17, 2003

For: CACHE CONTROL METHOD FOR NODE APPARATUS

**PETITION TO MAKE SPECIAL  
UNDER 37 CFR 1.102(d) and MPEP. §708.02, VIII**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

December 29, 2004

Sir:

**1. Petition**

Applicants hereby petition to make this application **Special**, in accordance with 37 CFR §1.102(d) and MPEP 708.02, VIII. The present invention is a new application filed in the United States Patent and Trademark Office on September 17, 2003 and as such has not received any examination by the Examiner.

**2. Claims**

Applicants hereby represent that all the claims in the present application are directed to a single invention. If upon examination it is determined that all the claims presented are not directed to a single invention, Applicants will make an election without traverse as a prerequisite to the granting of special status.

12/30/2004 EABUBAK1 00000032 10663700

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### **3. Search**

Applicants hereby submit that a pre-examination search has been made by a professional searcher, (a copy of which is attached), in the following classes and subclasses:

<u>Class</u>	<u>Subclass</u>
711	113, 138, 139, 154, 170, 203

### **4. Copy of References**

A listing of all references found by the professional searcher is provided on a Form PTO-1449 and copies of the references and the Form PTO-1449 are submitted as part of an Information Disclosure Statement (IDS) filed on even date.

### **5. Detailed Discussion of the References and Distinctions Between the References and the Claims**

Below is a discussion of the references uncovered by the search and cited in the IDS filed on even date that appear to be most closely related to the subject matter encompassed by the claims of the present application, and which discussion particularly points out how Applicants' claimed subject matter is distinguishable over those references. All other references uncovered by the search and cited in the IDS filed on even date are **not** treated in detail herein.

#### **a. Detailed Discussion of the References**

**U.S. Patent Application Number 2004/0186898 (Kimura et al.)** discloses a disk device, including a share volume with specified capacity that is used in common

among the plurality of clients, and a plurality of specific volumes that are segmented one another, each of which is associated with one of the plurality of clients. The data source device may be applied to a computer system with a node device that is connected between the data source device and the plurality of clients and relays the data between them. The data being relayed is cached in the disk device in the node device. The data stored in the share volume and the data stored in the specific volume on the data source device are preferably processed separately in the case of the node device. The data source device may output specific information to the node device, wherein the specific information is used to judge the volume in which respective data are stored, and the share volume or the specific volume. See, figures and summary.

**U.S. Patent Application Number 2003/0009640 (Arimilli et al.)** discloses a non-uniform memory access (NUMA) data processing system comprising a plurality of non-cacheable indicators that are each associated with a respective one of plurality of nodes, wherein a set non-cacheable indicator instructs the at least one processing unit in the associated node to not cache data associated with non-physical addresses within the group. See, figures, summary and claims 1-5.

**U.S. Patent Application Number 2004/0123068 (Hashimoto)** discloses a computer system, comprising a disk drive control block (408) for controlling the disk drives (122-125) according to the I/O commands from the host processor (101), and a disk cache control block (409) for controlling the data stored in the disk caches (119, 120) and makes cache hit/miss judgment or the like. See, figures, summary and paragraphs [0071]-[0077].

**U.S. Patent Numbers 5,423,019 (Lin), 5,452,447 (Nelson et al.), 5,860,107 (Patel), 6,799,244 (Tanaka et al.), U.S. Patent Application Numbers 2003/0074525 (Yamauchi et al.), 2003/0188085 (Arakawa et al.), 2004/0034746 (Horn et al.), 2004/0123049 (Cypher et al.), and European Patent Numbers EP509676 (Mirza), and EP 886216 (Shiell et al.) show a cache control and node apparatuses.**

**b. Distinctions Between the References and the Claims**

The present invention as recited in the claims filed are not taught or suggested by any of the above noted references whether taken individually or in combination with each other or in combination with any of the other references now of record.

The present invention as recited in the claims is directed to a cache control method in a computer system, in which a storage device, a node device including a disk device for cache and clients are connected together, for controlling the cache in the disk device, that includes: in the storage device or the client, sending attribute information of data to the node device, the data being relayed by the node device, the attribute information indicating as to whether or not the data is allowed to be cached in the disk device; in the node device, judging as to whether or not the data to be relayed is allowed to be cached in the disk device, based on the attribute information; and relaying the data, which has been judged as non-cacheable, without process of the cache in the disk device.

The above described features of the present invention, particularly sending attribute information of data to a node device, the attribute information indicating as

to whether or not the data is allowed to be cached in the disk device, in the node device, judging as to whether or not the data to be relayed is allowed to be cached in the disk device, based on the attribute information, judging as to whether or not the data to be relayed is allowed to be cached in the disk device, based on the attribute information, and relaying the data, which has been judged as non-cacheable, without process of the cache in the disk device, are not taught or suggested by any of the references of record whether taken individually or in combination with each other.

**6. Fee (37 C.F.R. 1.17(i))**

The fee required by 37 C.F.R. § 1.17(i) is to be paid by:

☒ the Credit Card Payment Form (attached) for \$130.00.

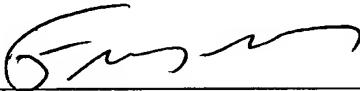
☐ charging Account \_\_\_\_\_ the sum of \$130.00.

A duplicate of this petition is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, Deposit Account No. 50-1417 (1288.43131X00).

Respectfully submitted,

MATTINGLY, STANGER & MALUR, P.C.



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Frederick D. Bailey  
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FDB/sdb  
Enclosures